Revised: August 19, 1998

PERCHLORATE STAKEHOLDERS FORUM

Phoenix, Arizona

August 27, 1998

Thank you and good morning. I'd like welcome all of you to today's forum. The forum is sponsored by the Interagency Perchlorate Steering Committee. The Committee was formed in January 1998 to bring together federal, State, and tribal representatives to coordinate all of our work on perchlorate.

You know, I've been doing environmental work for EPA for close to 20 years now. When you've been around for as long as I have, you gain a lot and you lose a lot.

On the loss side, your hair thins and turns gray, your waistline thickens, and you have to use bifocals to read the fine print!

But on the gain side, you hope you're a little wiser, but at the very least you have more experience and a little perspective that goes with that experience. I'd like to open today's forum by trying to put perchlorate in perspective.

EPA was established in 1970.

The Clean Water Act was passed in 1972 (~~1948~~ Federal Water Pollution Control Act 197

The Safe Drinking Water Act was enacted in 1974.

The Resource, Conservation, and Recovery Act (RCRA) was signed into law in ~~1970~~ 1976

Superfund was passed in 1980

We've been cleaning up sites for almost 18 years now. We're working on ~~1400~~ 1249 sites on the Superfund National Priorities List. Construction is completed at ~~521~~ 522 of those sites. The States and Tribes are working on even more sites than we are.

We've cleaned up soil, air, and water at every conceiveable type of site. From landfills, mining sites, and federal facilities. To train wrecks, metal plating shops, and oil spills.

We sample for, found, and cleaned up hundreds of chemicals. From solvents, metals, and pesticides. To bombs, illegal drugs, and MTBE.

Karen Barrett
8/14 — 522 construction co
Sites - final or proposed 1249
S.N.A.P.

After all these years, we lulled ourselves into thinking that we've seen everything there is to see and that we know what to do in every situation.

And then comes perchlorate. Isn't it astonishing–it is to me--that just last year we "discovered" perchlorate? Over the past year, I've often asked myself how could it be?

Is it because perchlorate is a new chemical?

No. Perchlorate was ~~used~~ manufactured commercially as early as 1890. (It was "discovered" in 1816) ~~[redacted]~~

Is it because perchlorate wasn't used in great quantity?

Not really. ~~DOD estimates that~~ 7 Dan Rogers will talk about how critical perchlorate is to DOD and NASA. At two manufacturing plants in Nevada alone, ~~over~~ 1.2 billion pounds of perchlorate were produced ~~from ____ to ____~~ since 1950. About 15,000 tons each year

Is it because we didn't know perchlorate was bad for you?

Again, not really. We first learned about the health effects of perchlorate in 1952 as it was being used as a drug to treat thyroid problems.

(the 1950's)

Is it because the perchlorate was used in only a few locations?

I wish that were true! Perchlorate was shipped and presumably used in 37 or more States. We have confirmed problems in 7 States. In California alone, ~~12~~ 14 facilities associated with DOD and NASA have found perchlorate in ground water. This includes seven [Kevin, what are the seven?] Superfund sites whose cleanups are now on hold until we figure out what to do with perchlorate.

mostly (but not all)

8 sites, but 2 are not immediately affecting cleanup yet.

Is it because perchlorate impacts a small number of people?

Well, let me tell you the worst of it. In Nevada, we found two of largest manufacturers of perchlorate, Kerr McGee and PEPCON. [Kevin, what name should I use for PEPCON?] The ground water coming from these two facilities is severely contaminated with perchlorate. The ground water eventually surfaces and empties into Lake Mead which is the huge lake created by Hoover Dam. Even after incredible dilution in Lake Mead the concentration are close to the interim drinking water standard. Over 1 million people in Nevada draw their water from Lake Mead. Of course, from Lake Mead the perchlorate contamination travels down the Colorado River, eventually impacting ~~7~~ Indian tribes, the State of Arizona, and potentially over 10 million customers of the Metropolitan Water District in Los Angeles.

(now American Pacific – but use PEPCON for the plant in Henderson)

10 or more

(MWD has 16-17 million customers, but Colorado R. is 2/3rds of their source supply)

NPL sites:
1. Aerojet
2. Mather
3. San Gabriel - Baldwin Park OU
4. NASA JPL
5. Edwards AFB (cleanup not immediately affected)
6. Lawrence Livermore Site 300 (D.O.E)
7. El Toro Marine Corps Air Station
8. San Fernando Valley - Glendale OU (cleanup not affected)

So why is it that we only "discovered" perchlorate in 1997. I think there were two factors involved.

First, just as better science has moved us from ppm to ppb and now ppt and parts per quadrillion, [Kevin, is this the right term?] better science helped us "discover" perchlorate. The old lab analytical method had a detection limit of 400 ppb. In March 1997, we made a quantum leap in our ability to analyze for perchorate in the lab. Now our detection limit is 4 ppb, two full orders of magnitude lower.

The second factor was the extraordinary efforts of many of the people in this room of putting 2 and 2 together. The new lab detection limit coupled with what we knew about health effects drove the State of California to establish an interim drinking water standard (18 ppb) which both California and Nevada are using today. [Kevin, or was the standard established before the new analytical method?] And this new drinking water standard in turn drove the sampling which lead to discovering how widespread the problem truly is.

But while the perchlorate problem has huge dimensions, I have a lot of hope because of the same two things that triggered the "discovery" in the first place.

You are right. 18 ppm originated with EPA in '92-'95 but was not accepted as an state action level until last summer, after the analytical method

First, once again, better science. As you will learn in today's forum, in within the first year, we launched several major scientific efforts all at the same time.

We're [Kevin: What verb or phrase should I use here?] assessing (study and interpreting) the health effects and toxicity of perchlorate.

We're [Kevin: What verb or phrase should I use here?] verifying the analytical method for perchlorate.

We're [Kevin: What verb or phrase should I use here?] researching (studying) the ecological impacts of perchlorate.

Finally, and perhaps most importantly to solve the problem, we moving as fast as we can to develop cost effective technologies for the treatment of large volumes of perchlorate contaminated water.

The second reason I have hope is that all of the major parties–EPA, DOD, the health agencies, the States and tribes, and private industry–recognize the seriousness of the perchlorate problem, feel the urgency to solve the problem, and are so far all pulling in the same direction. A crisis often starts with pointing fingers, but his crisis seems to have brought out the best in people so far.

The cooperation and communication within the Interagency Perchlorate Steering Committee has been remarkable. And I am confident that the Steering Committee's efforts to share knowledge as it is being developed (as we're doing today) and efforts to involve the public will lead to better and more understandable decisions down the line.

Although we've off to a great start, there is much to be done. And so let me do my part, by getting off the podium so you can interact with the real people you came to listen and talk to! I'd like to end by thanking a few key people.

> [Kevin: Please give me a list of people to thank for setting up the conference in Phoenix. Let me know what their roles were. Include Katherine and yourself.]
>
> [Kevin: Please give me a list of people to thank for their work on perchlorate in general. Let me know what their roles are.]

Thank you all again.

[Kevin, I don't want my talk to be too alarming and I don't want my talk to be too Pollyanna-ish. What do you think?]

Interagency Perchlorate Steering Committee.

Executive Committee:

Lt. Col. Dan Rogers, USAF (critical organization and coordination)
Annie Jarabek (EPA - office of Research & Development - Toxicologist)
Peter Grevatt (Gre·VATT) EPA - OSWER (Senior Science Advisor to Tim Fields)
Mike Osinski (yes, the same Mike Osinski)
EPA HQ - Office of ground water & drinking water
Kevin Mayer
Catherine McCracken

Organizer of Phoenix conf & facility host.

Dr. Karen Medville - ASU-West (she advises the Tribes on science/toxicology)
Dale Ohnmeiss and colleagues in ADEQ
John Lewis and staff of Inter Tribal Council of Arizona and member tribes
} Hosts of conference

Keith - Russel Rhodes will be a Keynote speaker in Phoenix